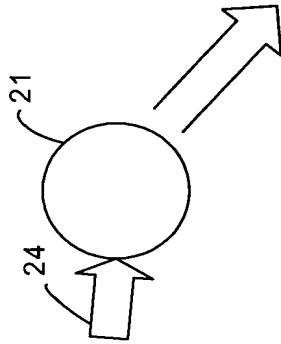


```
graph TD
    10[SELECT m AND M VALUES] --> 11[CALCULATE B = sqrt(m/M) FOR EACH WIDGET WITH AN ASSIGNED VALUE FOR m]
    11 --> 12{DOES ANY B OVERLAP ANOTHER WIDGET CALCULATED VALUE B?}
    12 -- YES --> 13[CALCULATE B = (x * sqrt(m2/m1)) / (1 + sqrt(m2/m1)) FOR EACH OVERLAP WHERE W <= x <= (B1 + B2) AND m1 AND m2 ARE ASSIGNED VALUES FOR WIDGET 1 AND WIDGET 2]
    12 -- NO --> 14{IS REAL SELECTION POINTER WITHIN ANY WIDGETS BOUNDARY?}
    13 --> 14
    14 -- YES --> 15[MOVE VIRTUAL SELECTION POINTER TO CENTER OF WIDGET HAVING B WITHIN WHICH REAL POINTER LIES]
    14 -- NO --> 17[MOVE VIRTUAL SELECTION POINTER TO COINCIDE WITH REAL SELECTION POINTER POSITION]
    15 --> 16[DISPLAY PRE-SELECTION INDICATOR FOR WIDGET]
    16 --> 17
    17 --> 14
```

The flowchart illustrates a process for selecting a widget based on calculated values and a real selection pointer. The process begins with selecting m and M values (10), followed by calculating $B = \sqrt{\frac{m}{M}}$ for each widget with an assigned value for m (11). A decision is made whether any B overlaps another widget's calculated value B (12). If YES, a calculation for each overlap is performed: $B = \frac{x \sqrt{\frac{m_2}{m_1}}}{1 + \sqrt{\frac{m_2}{m_1}}}$, where $W \leq x \leq (B_1 + B_2)$ and m_1 and m_2 are assigned values for widget 1 and widget 2 (13). If NO, the process proceeds to a decision: IS REAL SELECTION POINTER WITHIN ANY WIDGETS BOUNDARY? (14). If YES, the virtual selection pointer is moved to the center of the widget having B within which the real pointer lies (15), and a pre-selection indicator is displayed for the widget (16). If NO, the virtual selection pointer is moved to coincide with the real selection pointer position (17). The process then loops back to the decision at 14. The process continues continually.

FIG. 1



20

WIDGET PROPERTIES

Display Text: A

Size: X-Axis: 80 Y-Axis: 100

Color: White Black Blue Red

Shape: Circle Triangle Square

Mass: 5.75

Apply Cancel

FIG.2

FIG. 3A

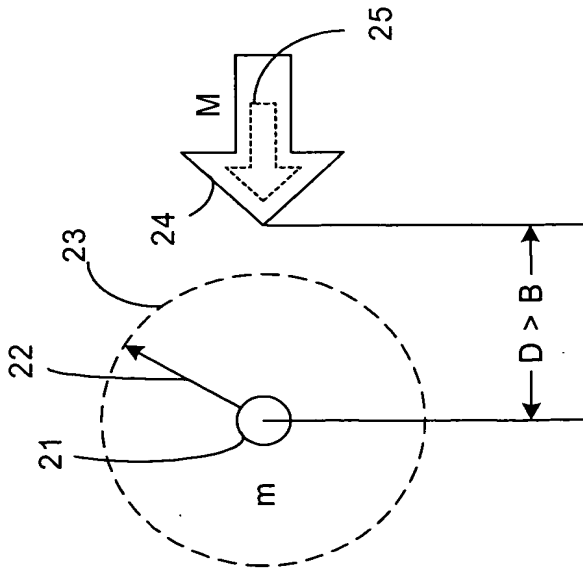


FIG. 3B

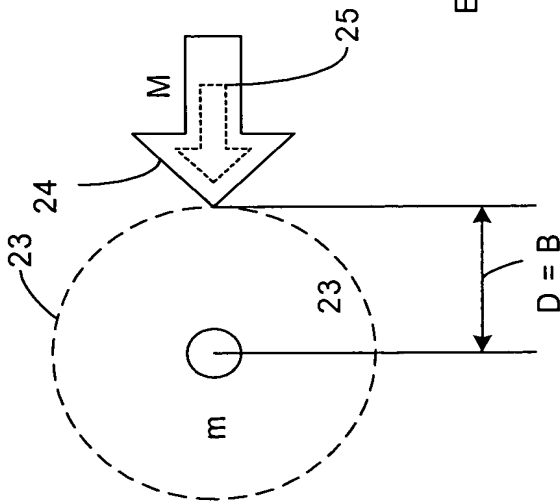
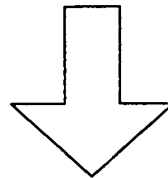
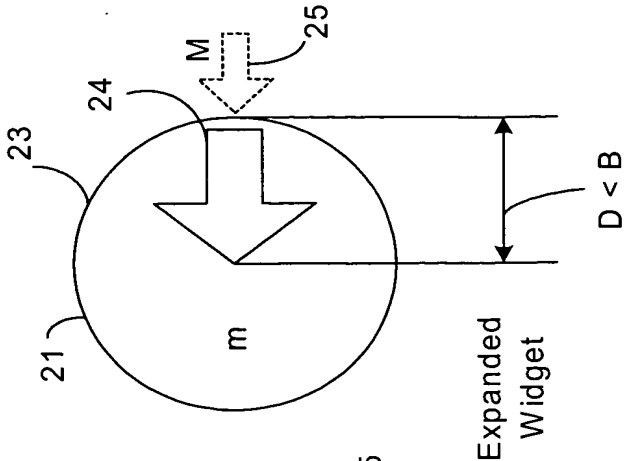


FIG. 3C



= DISPLAYED
SELECTION POINTER
(VIRTUAL POINTER)



= REAL PHYSICAL SELECTION
POINTER POSITION
(REAL POINTER)

FIG. 4

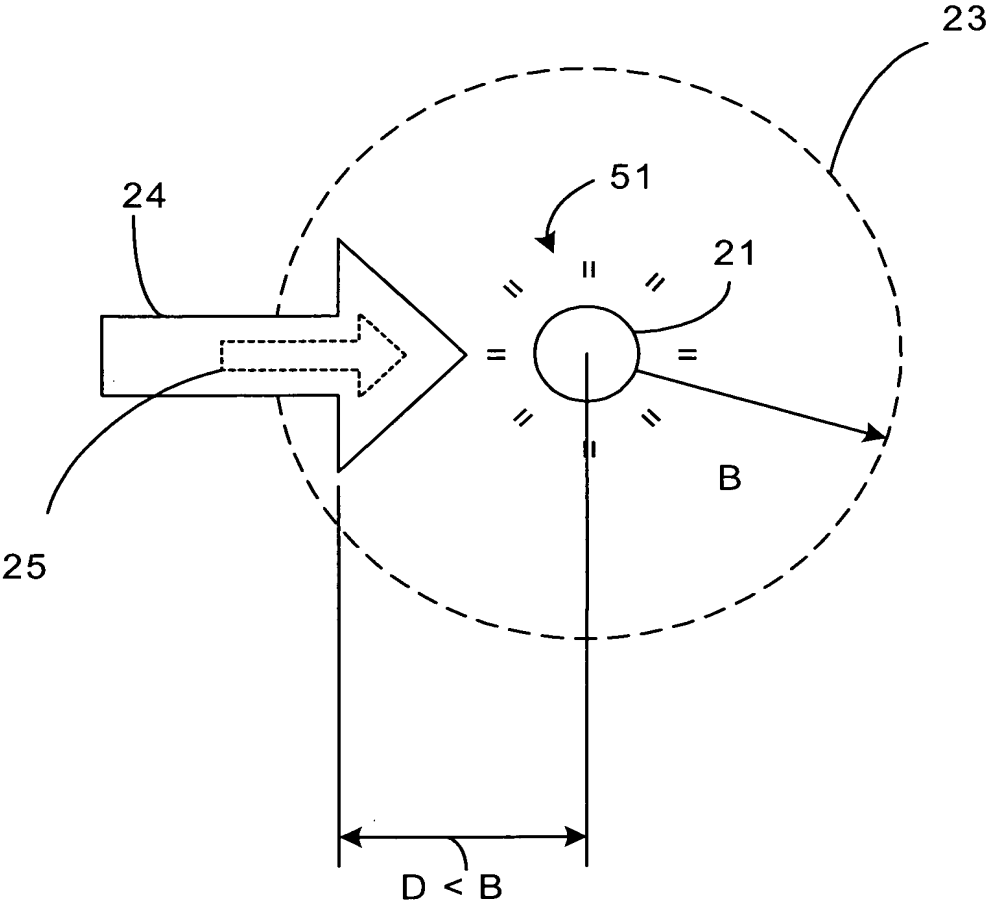
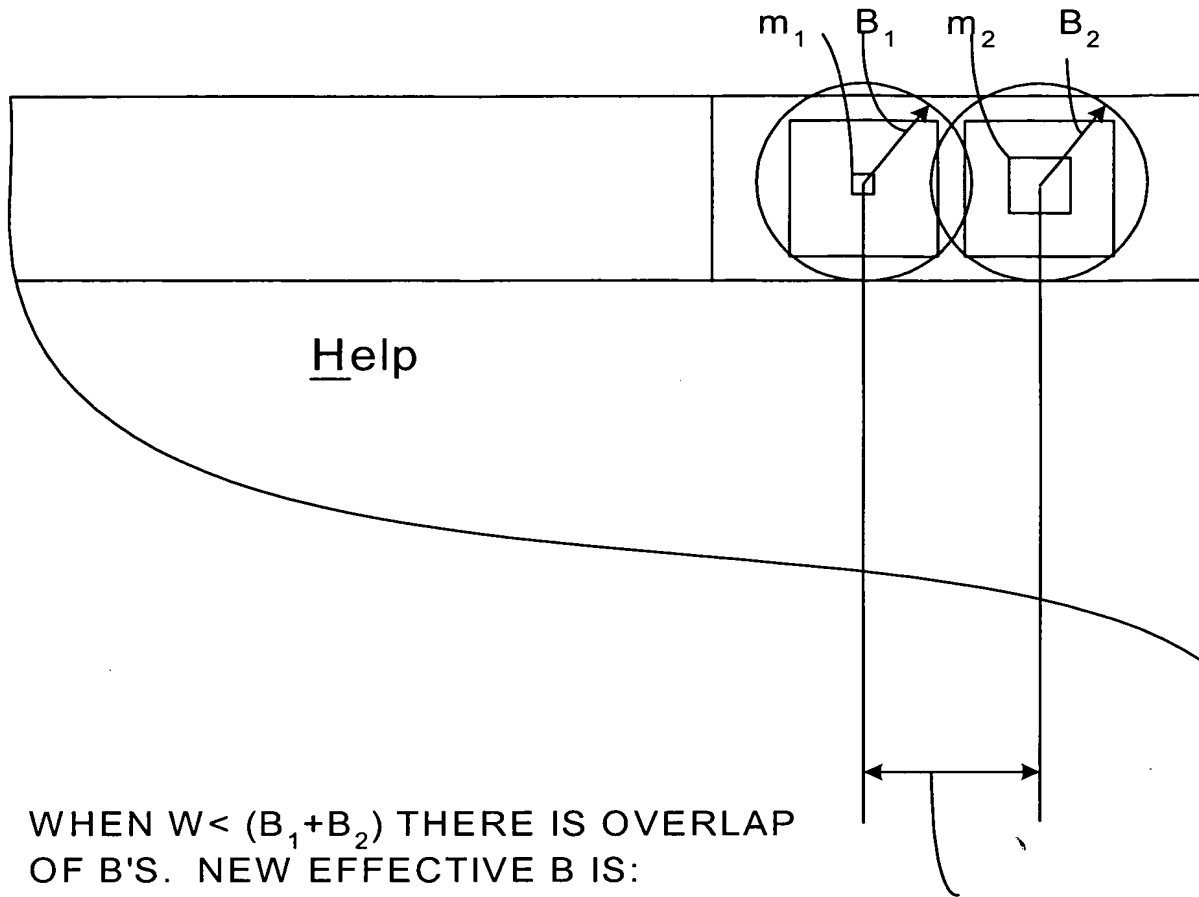


FIG. 5



WHEN $W < (B_1 + B_2)$ THERE IS OVERLAP
OF B'S. NEW EFFECTIVE B IS:

$$B = \frac{x \sqrt{\frac{m_2}{m_1}}}{1 + \sqrt{\frac{m_2}{m_1}}}$$

WHERE $W \leq x \leq (B_1 + B_2)$

FIG. 6A

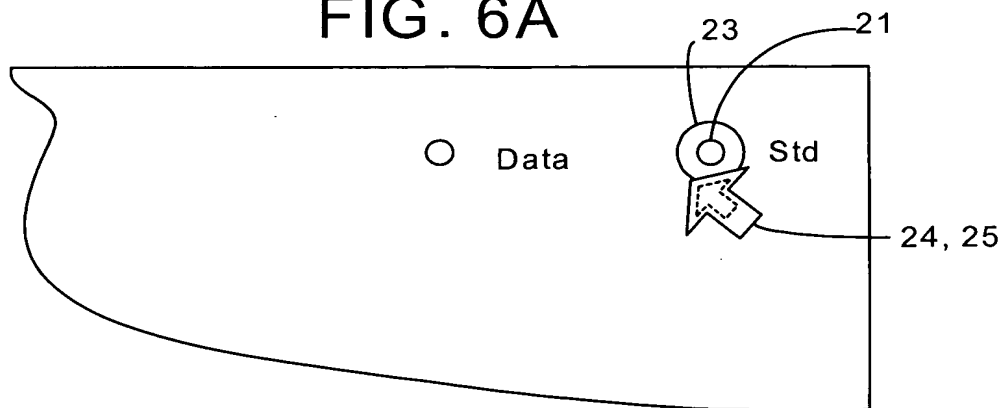


FIG. 6B

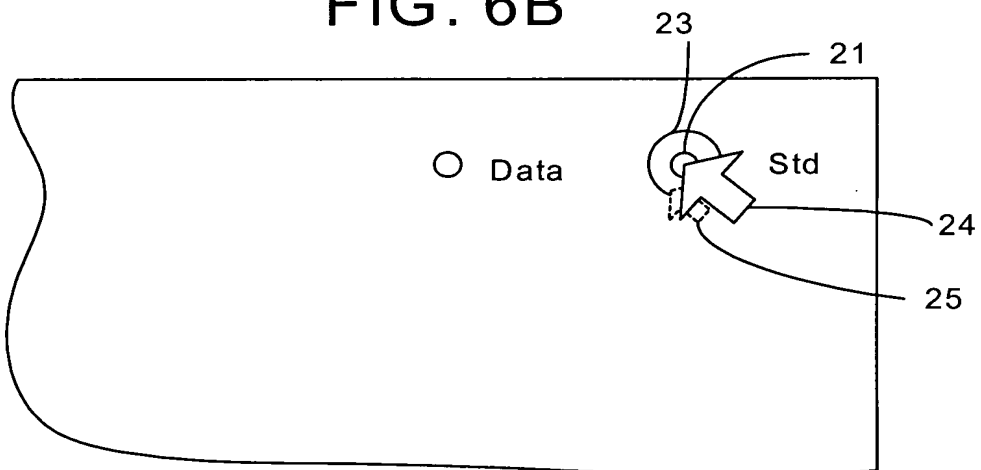
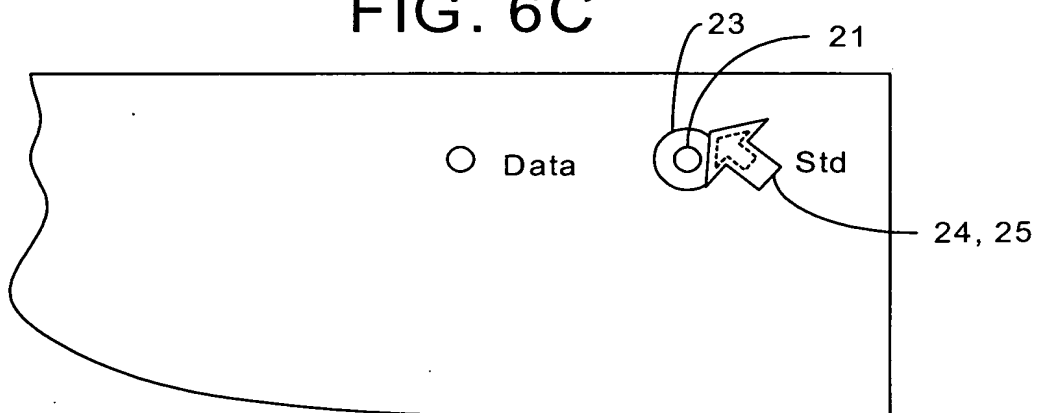


FIG. 6C



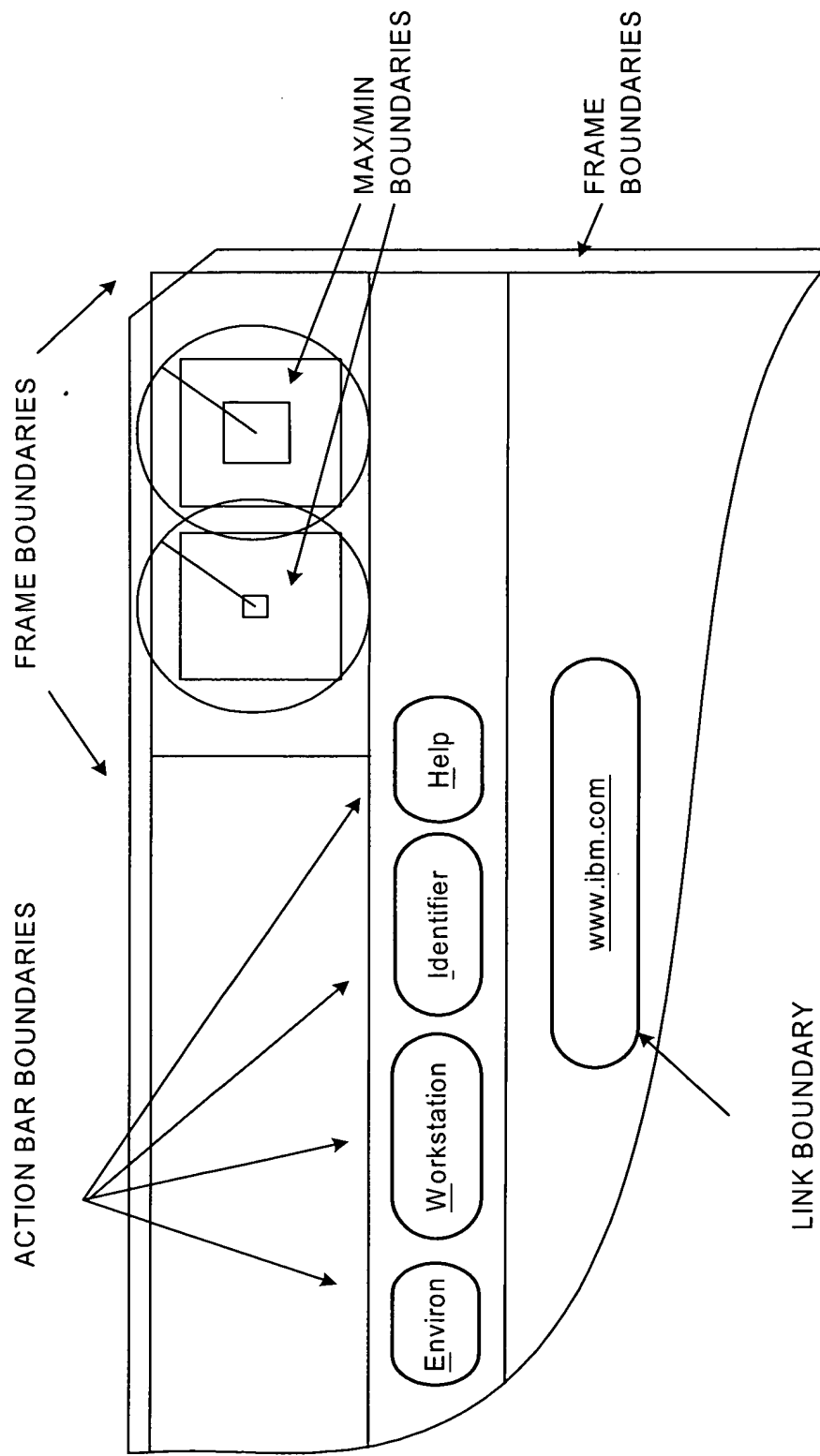


FIG. 7

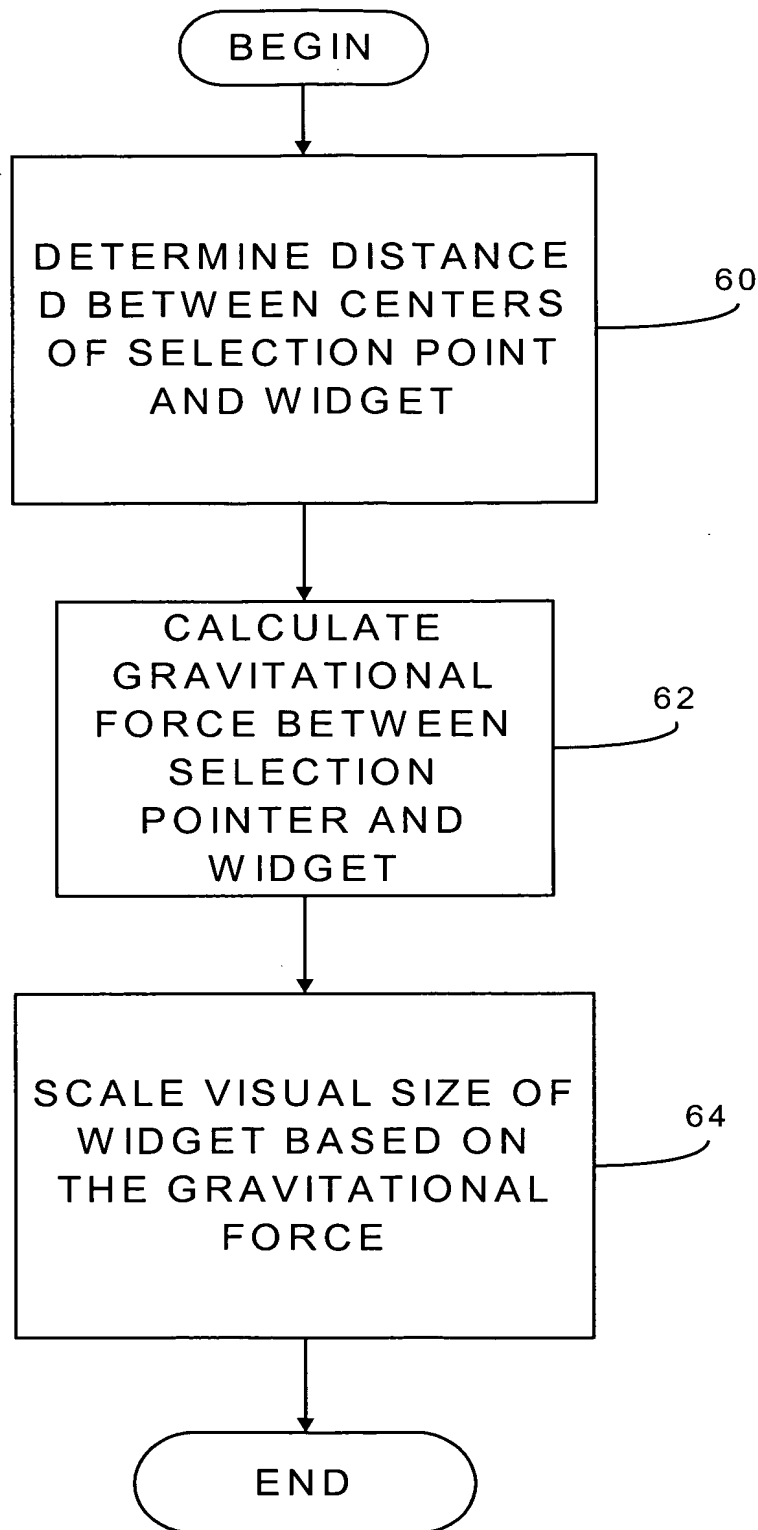


FIG. 8

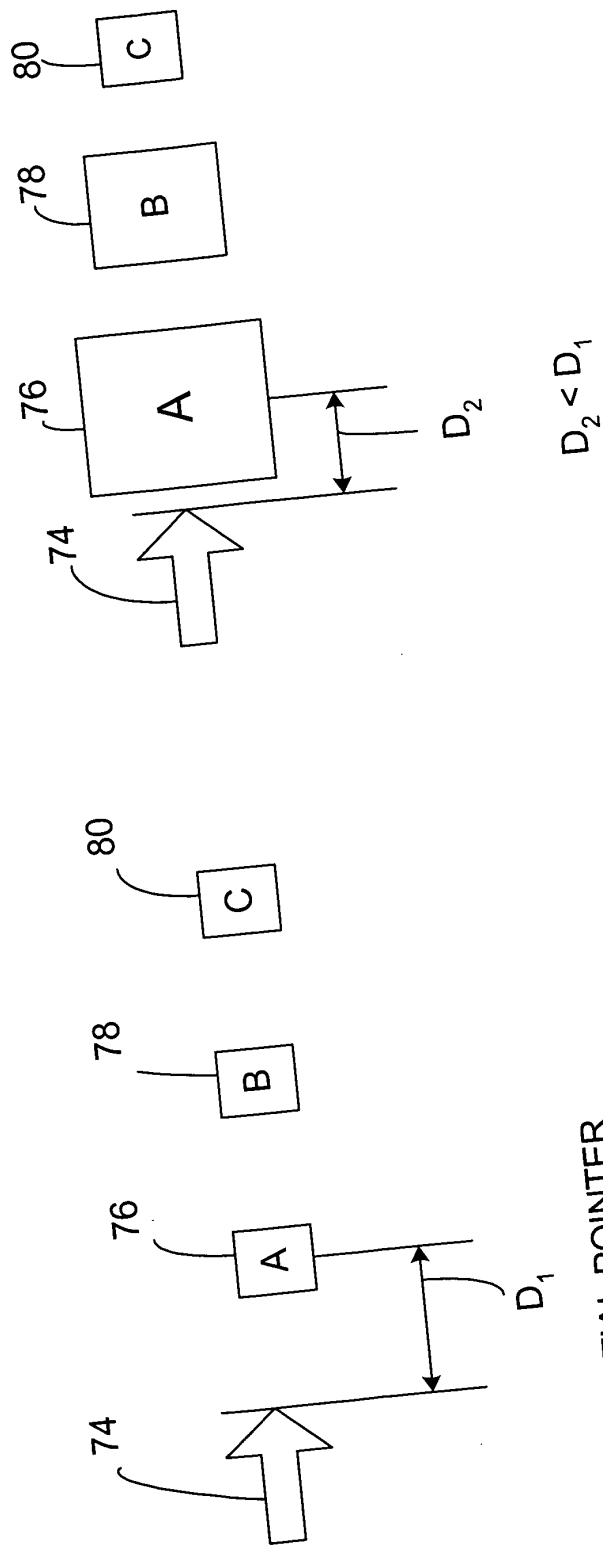


FIG. 9

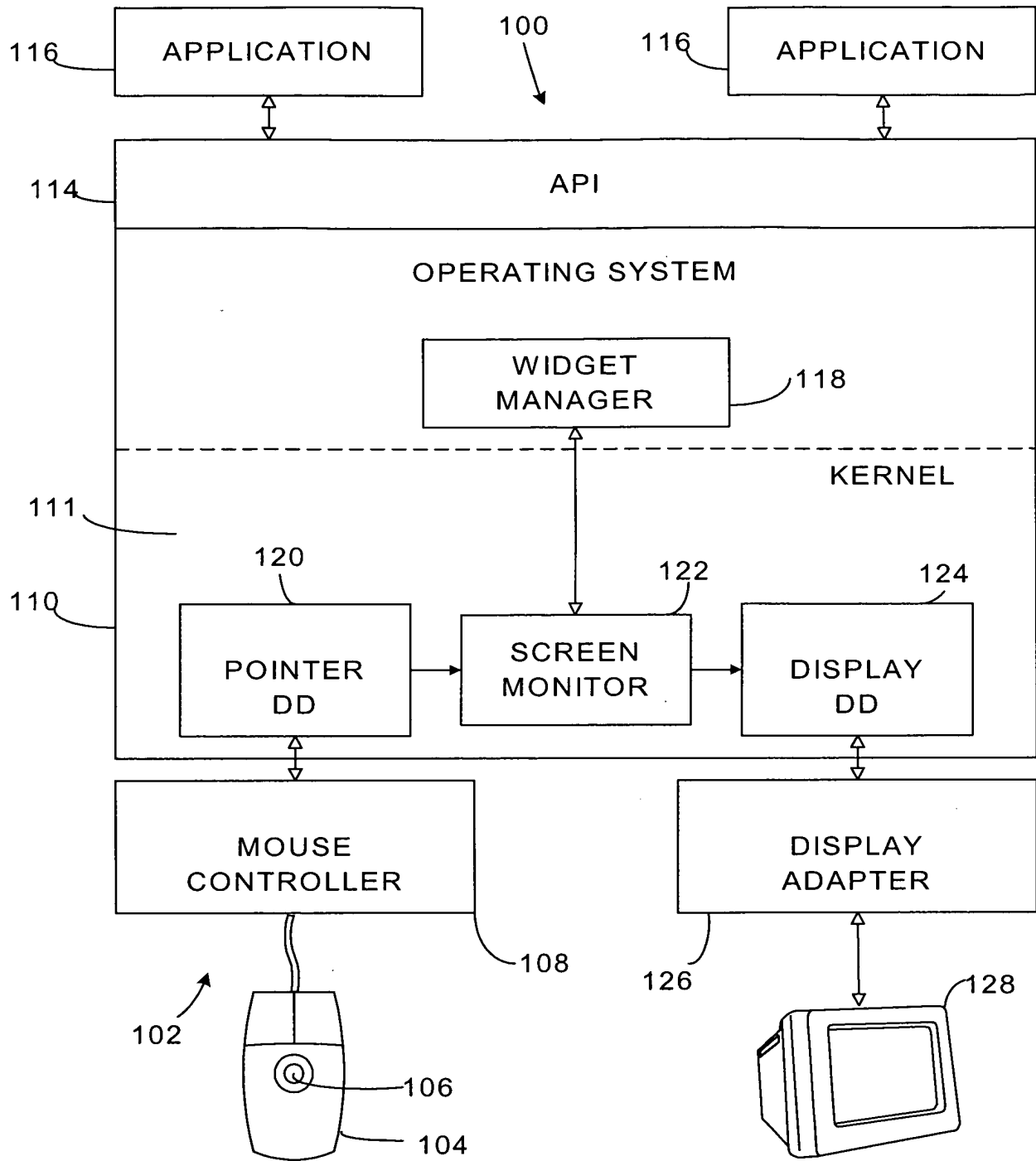


FIG. 10